



## AMENDMENTS TO THE CLAIMS

(Canceled)

2. (Currently amended) A ~~The~~ twisted waveguide ~~according to Claim 1,~~  
comprising:

first and second rectangular propagation path elements having different  
planes of polarization; and

a connection element connecting the first and second rectangular propagation  
path elements,

wherein the connection element has a fixed line length in a direction of  
electromagnetic-wave propagation of the first and second rectangular propagation path  
elements, and wherein the connection element includes projections which project  
inward so as to face each other, the projections concentrating an electric field of an  
electromagnetic wave entering from the first or second rectangular propagation path  
element and rotating a plane of polarization of the electromagnetic wave propagating  
through the connection element, and

wherein an inner periphery of the connection element surrounding a central  
axis extending in the direction of electromagnetic-wave propagation of the first and  
second rectangular propagation path elements includes surfaces substantially parallel  
to an H plane and an E plane of the first rectangular propagation path element, said  
surfaces forming a staircase such that abutting sections between the surfaces parallel to  
the H plane and the surfaces parallel to the E plane form the projections, the staircase  
being inclined in a direction corresponding to a direction in which an H plane of the  
second rectangular propagation path element is inclined.

3. (Previously presented) The twisted waveguide according to Claim 2, wherein the projections comprise two projections provided at two positions, wherein a plane extending between the two projections is inclined towards an E plane of the second rectangular propagation path element with respect to the E plane of the first rectangular propagation path element.

4. (Currently amended) The twisted waveguide according to ~~Claim 1~~ Claim 2, wherein the line length of the connection element in the direction of electromagnetic-wave propagation is substantially  $1/2$  of a guide wavelength with respect to a frequency of an electromagnetic wave to be propagated through the connection element.

5. (Currently amended) The twisted waveguide according to ~~Claim 1~~ Claim 2, wherein the connection element comprises a plurality of subelements disposed at multiple positions in the direction of electromagnetic-wave propagation.

6. (Currently amended) A wireless device comprising the twisted waveguide according to ~~Claim 1~~ Claim 2; and an antenna connected to one of the first and second rectangular propagation path elements included in the twisted waveguide.